

Work Order ID 150878

Thursday, September 08, 2016 3:17:07 PM

U/R

150878

AGG ship Nov 4

Page 1

Item ID: D119-646-041

Accept

N900040100

Setup Start *NS1*

Revision ID: URF 15-560

Stop *NS2*

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/23/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: SM Date SEP 08 2016

Tooling:

Date:

Run Start *NR1*

QC: Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3887-041	D
IIN-D119-646	C

100

0.00

100

DC

Doc.Control -USB or Paperwork

Memo

0.00

Photocopy bluefile & type labels per PPP D119-646-041 CHG004

N/A

DAS
21
9-89

NOV 02 2016

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

1- inspect Mat'L D2500-1-190 for damage

2-Cut tube to length as per dwg D3887 (154.8")

3- Ensure squareness of ends and scribe batch#

16-10-13

DAS
78
9-89

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Item ID: D119-646-041
Revision ID: URF 15-560
Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH
Start Date: 11/2/2016 Start Qty: 1.00 *1*
Required Date: 11/23/2016 Req'd Qty: 1.00 *1*
Reference:

Accept

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130

0.00

130

Skidtubes

Skidtubes

Memo

0.00

1- Install drill Jig DT9477 drill X-bolt spacer pilot holes using 3/16" drill first side only.

2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes.

3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9477

4- Open crossbolt spacer holes to finished size as per dwg D3887 (section D-D and E-E) ***DO NOT OPEN FWD Saddles Holes***

5- Deburr, blow out chips from inside of tube.

6- Bond web in place as per Dwg D3887 & QSI 015.

A/R Sikaflex-291 B135772Sikaflex expire date: 17-02-16Start: _____ Time: 8:30Finish: _____ Time: 8:10

***** (Adhere for 12 hours) *****

16-10-19 *DL*16-10-20 *DT/GR*

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Item ID: D119-646-041 Accept

N900040100Setup Start ***NS1***

Revision ID: URF 15-560

Stop ***NS2***

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 11/23/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

135

QC5- Inspect part completeness to step on W/O

0.00

135

QC

Memo

0.00

Quality Control

DAS
18
9-891 16-10-26

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Item ID: D119-646-041

Accept

N900040100Setup Start ***NS1***

Revision ID: URF 15-560

Stop ***NS2***

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 11/23/2016 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

140

0.00

Skidtubes

Memo

1- Bend FWD end of tube using bender 1 and FOLIO 31 bend prog. D3887. ***Must use bending aid DT9544, ensure proper positioning***

2- Cut FWD end of tube as per dwg D3887. ***Verify measurement***

3- Buff out marks left from bending

4- Drill FWD cap holes using DT8215. Open FWD & AFT cap holes to 0.208"

5- Open FWD saddle holes to finished size as per dwg D3887

6- Drill FWD x-bolt spacer holes using DT9816 and open to finished size.(verify measurement)

7- Drill Tow ring hole, using DT10047 locate from FWD saddle hole.(verify measurement). Open to finished size.

8- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole. (verify measurement) as per dwg.

9- C'sink FWD cap hole as per detail "C"

10- Drill holes for wearpads using DT8931, open to 0.297".

11- Countersink crossbolt spacer holes, and prepare tube for welding, deburr.

12- Deburr and blow out chips from inside of tube.

16-10-24

16-10-24

DAS
19
9-89

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Item ID: D119-646-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 15-560 Stop ***NS2***
Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH
Start Date: 11/2/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 11/23/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

68-6
81
DAS
18
9-89

1 0 16-10-24

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Item ID: D119-646-041
Revision ID: URF 15-560
Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH
Start Date: 11/2/2016 Start Qty: 1.00
Required Date: 11/23/2016 Req'd Qty: 1.00
Reference:

Accept

N900040100

Setup Start ***NS1***
Stop ***NS2***

Cust Item ID:
Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

NOTE:TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD
GROUND HANDELING FIXTURE,IF FIXTURE FITS WELL THEN
PROCEED. FIXTURE DT10091.

1-Insert crossbolt spacers. Weld as per QSI 004 and Dwg D3887. Remember to
back drill each hole before welding the other side. Use aluminum rod
A/RAluminum Rod *MB4026*

2-Grind cross bolt welds flush as per Dwg D3887. Ensure no pin hole.

3-Counterbore 5/16" x 0.750" deep as per Dwg D3887.

4- Deburr & Scribe batch # on Aft end of tube.

170

QC5- Inspect part completeness to step on W/O

0.00

170

QC

Quality Control

Memo

0.00

TEST FIT USING FIXTURE DT10091.

DAS

9

9-89

16-10-23

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Item ID: D119-646-041 Accept

Revision ID: URF 15-560

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00 *1*

Required Date: 11/23/2016 Req'd Qty: 1.00 *1*

Reference:

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180 *180* QC Quality Control	QC101 Inspect visual per QSI004- ground welds Memo Continue on w/o 152531	0.00 0.00							
190 *190* HandFinish Hand Finishing	Pressure Wash per QSI005 4.3 Memo Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.	0.00 0.00							
200 *200* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: _____ OVEN TEMPERATURE: _____ FINISH TIME: _____ SEE Attached	0.00 0.00							

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Quality Control

★
SEE
Attached

492 and apply o'ring lube

CONFIRMED
on 4/6/52

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Item ID: D119-646-041 Accept

N900040100Setup Start ***NS1***

Revision ID: URF 15-560

Stop ***NS2***

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 11/23/2016 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	Wing Walk as per dwg QSI005 4.4 Batch _____	0.00							
250	HandFinish	0.00							
Hand Finishing	Memo								
251	QC5- Inspect part completeness to step on W/O	0.00							
251	QC	0.00							
Quality Control	Memo								
260	Identify as per dwg & Stock Location: _____	0.00							
260	Packaging	0.00							
Packaging	Memo								

Not continue on w/b 152531

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Item ID: D119-646-041 Accept

Revision ID: URF 15-560

Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016 Start Qty: 1.00 *1*

Required Date: 11/23/2016 Req'd Qty: 1.00 *1*

Reference:

N900040100Setup Start ***NS1***Stop ***NS2***

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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270

QC21- Final Inspection - Work Order Release

0.00

270

QC

Memo

0.00

Quality Control

DAS

21

9-89

NOV 02 2016

DAS

21

9-89

NOV 02 2016

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150878

D119-646-041

Required Date: 11/23/2016

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC
10.02.22 per PAR 09-043 EC verified by:DD IPP rev B
(DEOD3887-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 12.11.05
chg003 ECN13-534 DD verf:JLM IPP REV:D 13.03.20 per

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2500-1-190		Manufactured	No			110	Each	60.0000	1	1			
D2500-1-190 Ext'n - T Beam Tube 4"													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		60							
				145247		60							
D2579		Manufactured	No			140	Each	137.0000	2	2			
D2579 Crossbolt Spacer													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG001		137							
				123997		1							
				141711		136							
D2855-3		Manufactured	No			240	Each	73.0000	2	2			
D2855-3 Cap													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP001		73							
				142564		73							

Picklist Print

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Work Order ID: 150878

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Parent Item: D119-646-041

D119-646-041

Parent Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016

Required Date: 11/23/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1611-005

Purchased

No

240

Each

216.0000

16

16

NAS1611-005

O-RING

Location

Loc Qty

Loc Code

FP001

216

m129198

11

m133498

81

m134816

24

m135465

100

D3492-5

Manufactured

No

240

Each

229.0000

16

16

D3492-5

Plug

Location

Loc Qty

Loc Code

FP001

229

133396

8

136396

6

138198

2

142818

14

145446

199

D3672-1

Manufactured

No

240

Each

1,246.000

2

2

D3672-1

Washer, Phenolic

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

928

112218

4

134785

424

150074

500

ST049

308

147077

308

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Work Order ID: 150878

150878

Parent Item: D119-646-041

D119-646-041

Parent Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016

Required Date: 11/23/2016

Start Qty: 1.00

Required Qty: 1.00

D3681-1

Manufactured No

160

Each

129.0000

8

8

D3681-1

Spacer

BE1610-24

Location

Loc Qty

Loc Code

LG001

129

145956

1

147557

48

148201

80

D3847-1

Manufactured No

240

Each

78.0000

5

5

D3847-1

Wearpad

Location

Loc Qty

Loc Code

FP001

78

138338

10

142854

2

145857

5

145858

9

145859

30

148686

22

D3847-11

Manufactured No

240

Each

21.0000

1

1

D3847-11

Wearpad

Location

Loc Qty

Loc Code

FP001

21

138418

1

142783

19

146945

1

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Work Order ID: 150878

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Parent Item: D119-646-041

D119-646-041

Parent Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016

Required Date: 11/23/2016

Start Qty: 1.00

Required Qty: 1.00

D3885-1 Manufactured No 140 Each 23.0000 1 1

D3885-1

Standard Web

Location	Loc Qty	Loc Code
LG002	23	

142573

3

146232

20

D3903-1 Manufactured No 160 Each 51.0000 12 12

D3903-1

Spacer

Location	Loc Qty	Loc Code
LG001	51	

142730

7

148673

44

ALS4-1032-130 AELS4-1032-130 Purchased No 220 Each 5,435.000 30 30

ALS4-1032-130

Rivnut

Location	Loc Qty	Loc Code
CCK004	4400	

M135442

4400

FG 50

FG

M135442

50

FP001 529

M133077

122

M134502

407

ST556 456

M135442

456

no 152531

1670-20 21
BE 1670-24
B 1502B1 *12

Picklist Print

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Parent Item: D119-646-041

D119-646-041

Parent Item Name: AW119 Replacement Skidtube with Wearpads - Fits LH or RH

Start Date: 11/2/2016

Required Date: 11/23/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-C52

Purchased

No

Each

85.0000

2

MS24694-C52

SCREW

Location

Loc Qty

Loc Code

FP001

29

m127059

17

m133855

12

ST285

50

m135466

50

ST287

6

124308

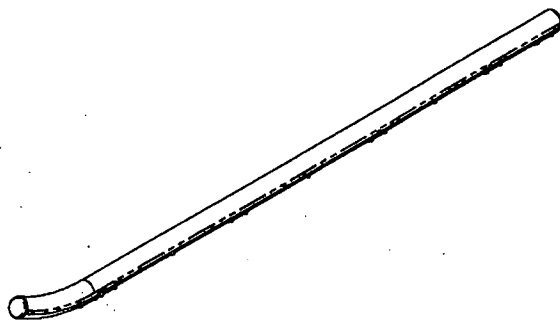
6

w/o
152531

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D3887-041 STANDARD SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3887-043 STANDARD SKIDTUBE ASSY WITH WEAPLATE (SIMILAR)
D3887-045 STANDARD SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-1 WEB
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3887-041 = 32.0 lbs
D3887-043 = 37.0 lbs
D3887-045 = 38.1 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES
ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT
PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT
PORTION OF THE TUBE.
- 10) INSERT D3885-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE
WITH SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO $\phi 0.197$ HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8931 TO LOCATE AND DRILL $\phi 0.297$ HOLES FOR WEARPLATE INSERTS.
INSTALL AELS-1032-130 INTO D3887-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS
WITH SIKAFLEX-241/291.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3887-041	STD SKIDTUBE ASSY WITH WEARPAD
2		X		D3887-043	STD SKIDTUBE ASSY WITH WEARPLATE
3			X	D3887-045	STD SKIDTUBE ASSY WITH TRAINING WEARPLATE
10	2	2	2	D2579	CROSS BOLT SPACER
11	2	2	2	D2855-3	CAP
12	16	16		D3492-045	PLUG ASSY
13	2	2	2	D3872-1	PHENOLIC WASHER
14	8	8	8	D3881-1	SPACER
17	5	5		D3847-1	WEARPAD
18	1	1		D3847-11	AFT WEARPAD
19				D3847-043	FWD WEARPLATE ASSY
20		1		D3847-045	CENTER WEARPLATE ASSY
21		1		D3847-047	AFT WEARPLATE ASSY
22			1	D3849-041	FWD TRAINING WEARPLATE ASSY
23			1	D3849-043	AFT WEARPLATE ASSY
24	1	1	1	D3885-1	STANDARD WEB
25	1	1		D3887-11	STANDARD SKIDTUBE
26			1	D3887-13	STANDARD SKIDTUBE
27	12	12	12	D3903-1	SPACER
28			16	D3904-1	WASHER
41	30	30		ALS-1032-130	INSERT
42	32	32	2	AN3C5A	BOLT
43			8	AN3C48A	BOLT
44	32	32		NAS1149C0332R	WASHER (OR AN890C10L)
45			8	MS21043-3	NUT
46	2	2	2	MS24894-C52	SCREW

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150818

SEP 08 2016

RELEASED

2014 NOV 24
ECL 14-628

UNDER REVIEW

15.04.30 URF15-560 AP

D	REVISED BEND TOLERANCES FOR MANUFACTURABILITY, 135.07 WAS 134.04 (ZN D5-6), ADD 8.07 (ZN C2-8), ADD 116.8 (ZN D5-6), DELETE GASKETS (BOM, SH 2)	DB	13.09.20
C	(SHT1, P/L ZN C2-3, C2-2, C2-1) ITEM 13, QTY 2 WAS 4, ITEM 42, QTY 32 WAS 34, ITEM 44, QTY 30 WAS 32, ADD ITEM 46, MS24894-C52 WAS AN3C5A, 2 PLCS, (ZN C1-5, C1-6, B4-7) $\phi 0.201$ CSK $\phi 0.385$ X 100" WAS $\phi 0.214$ THRU, ADDED DETAIL F (ZN C4-5, C4-6, B5-7), ADD ITEM 10, D2579 CROSS BOLT SPACER (ZN D4-1, A5-7)	DB	13.02.19
B	ALS-1032-130 WAS AELS-1032-130 (ZN C4-1, C5-7, C3-7); ADD DT8931 (ZN A8-1); ADD 134.04 (ZN C4-8); D2855-3 WAS D2579 (ZN D4-1, C1-2, C2-2, C1-3, C2-3, C1-4, C2-4); AN3C5A WAS AN3C48A (ZN C5-2, C2-2, C5-3, C2-3, C5-4, C2-4); $\phi 0.313$ WAS $\phi 0.328$ (ZN C4-5, C4-5, C2-7 & B3-7) REVISED NOTE N (ZN B3-7)	RF	09.06.30
A	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE USA, INC.	
DRAWN	DB	KENT, WA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D3887	SHEET 1 OF 8
APPROVED		TITLE	SCALE
DE APPR.		A119 STD SKIDTUBE ASSY	NTS
DATE	13.09.20	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY METHOD WITHOUT PERMISSION FROM DART AEROSPACE USA, INC.	

AN3C5A BOLT
D3872-1 PHENOLIC WASHER
NAS1149C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2855-3 CAP

D3847-11
WEARPAD

1.5
1.5
2.00 DISTANCE TO D3885-1 WEB, REF

AN3C5A BOLT
NAS1149C0332R WASHER
24 PL

BLACK ANTI-SKID TO 0.5
ABOVE LOCATION RIDGE
TYP

11
Ø0.197
8 PL PER SIDE
REF

PLUG UNUSED INSERTS WITH
AN3C5A BOLT
NAS1149C0332R WASHER
6 PL

D3847-1
WEARPAD
5 PL

D2855-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24894-C52 SCREW
(1 PER SIDE)

D3887-041 STANDARD SKIDTUBE ASSY WITH WEARPAD
(MAKE FROM D3887-11)

UNDER REVIEW

15.04.30 URF15-560 AP

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2014 NOV 24 *ap*

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AN3C5A BOLT
D3872-1 PHENOLIC WASHER
NAS1149C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2855-3 CAP

D3847-11
WEARPAD

D3847-047
AFT WEARPLATE ASSY

D3847-045
CENTER WEARPLATE ASSY

D3847-043
FWD WEARPLATE ASSY

D3847-1
WEARPAD
5 PL

AN3C5A BOLT
NAS1149C0332R WASHER
30 PL

BLACK ANTI-SKID TO 0.6
ABOVE LOCATION RIDGE
TYP

11
Ø0.197
8 PL PER SIDE
REF

2.00 DISTANCE TO D3885-1 WEB, REF

D2855-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24694-C52 SCREW
(1 PER SIDE)

D3887-043 STANDARD SKIDTUBE ASSY WITH WEARPLATE
(MAKE FROM D3887-11)

UNDER REVIEW

15.04.30 URF15-560 AP

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AN3C5A BOLT
D3672-1 PHENOLIC WASHER
NAS1149C0332R WASHER
(1 PER SIDE)

SEAL WITH
SIKAFLEX-241/291

D2855-3 CAP

AN3C46A BOLT
D3904-1 WASHER, 2 PL
MS21043-3 NUT
8 PL

BLACK ANTI-SKID TO 0.5
ABOVE LOCATION RIDGE
TYP

1.5
1.5
1.5

2.00 DISTANCE TO D3885-1 WEB

D3849-043
AFT TRAINING WEARPLATE ASSY

1.5
1.5

D3849-041
FWD TRAINING WEARPLATE ASSY

1.5 D2855-3 CAP

SEAL WITH
SIKAFLEX-241/291

MS24894-C52 SCREW
(1 PER SIDE)

D3887-045 STANDARD SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3387-13)

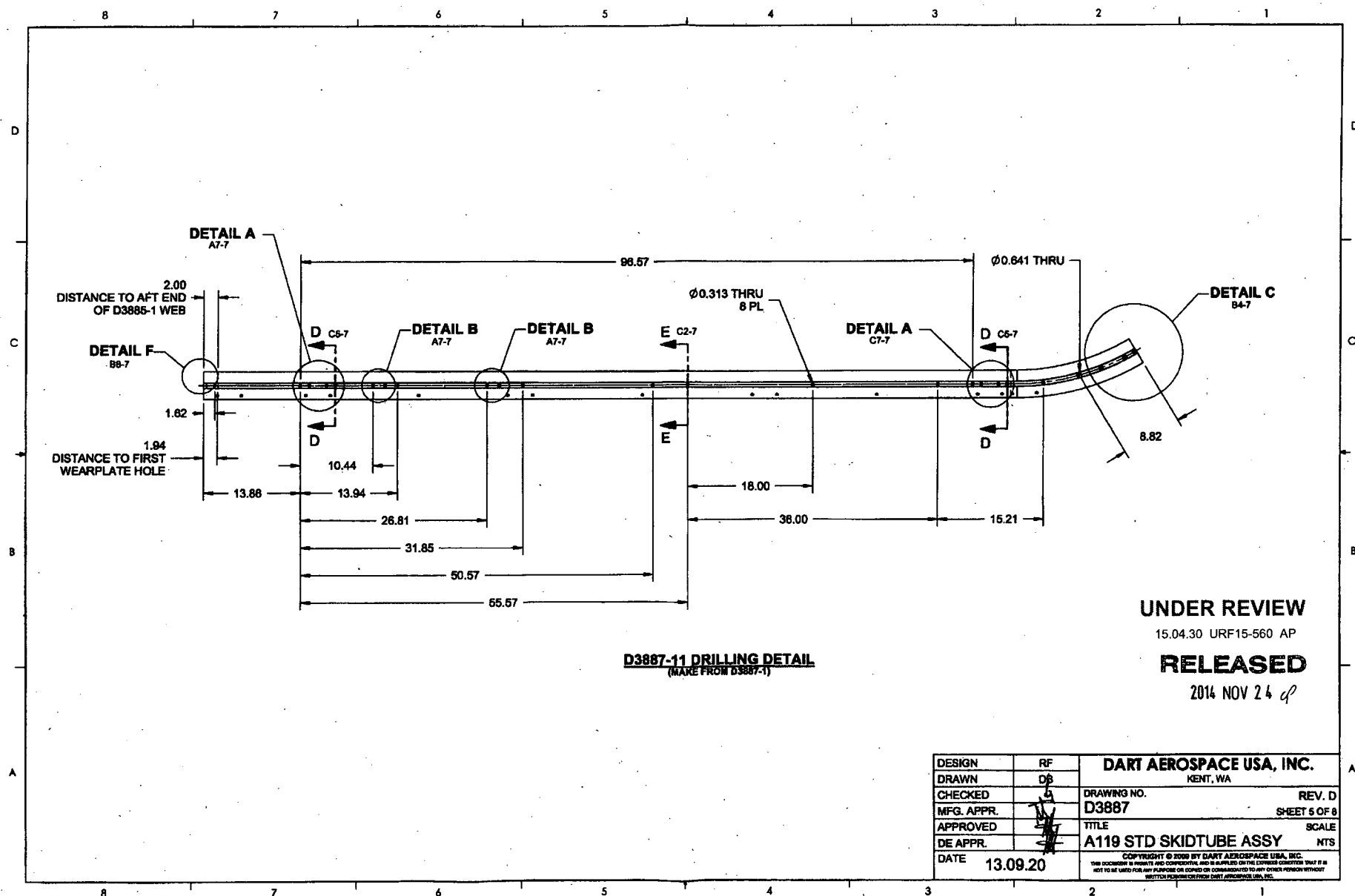
UNDER REVIEW

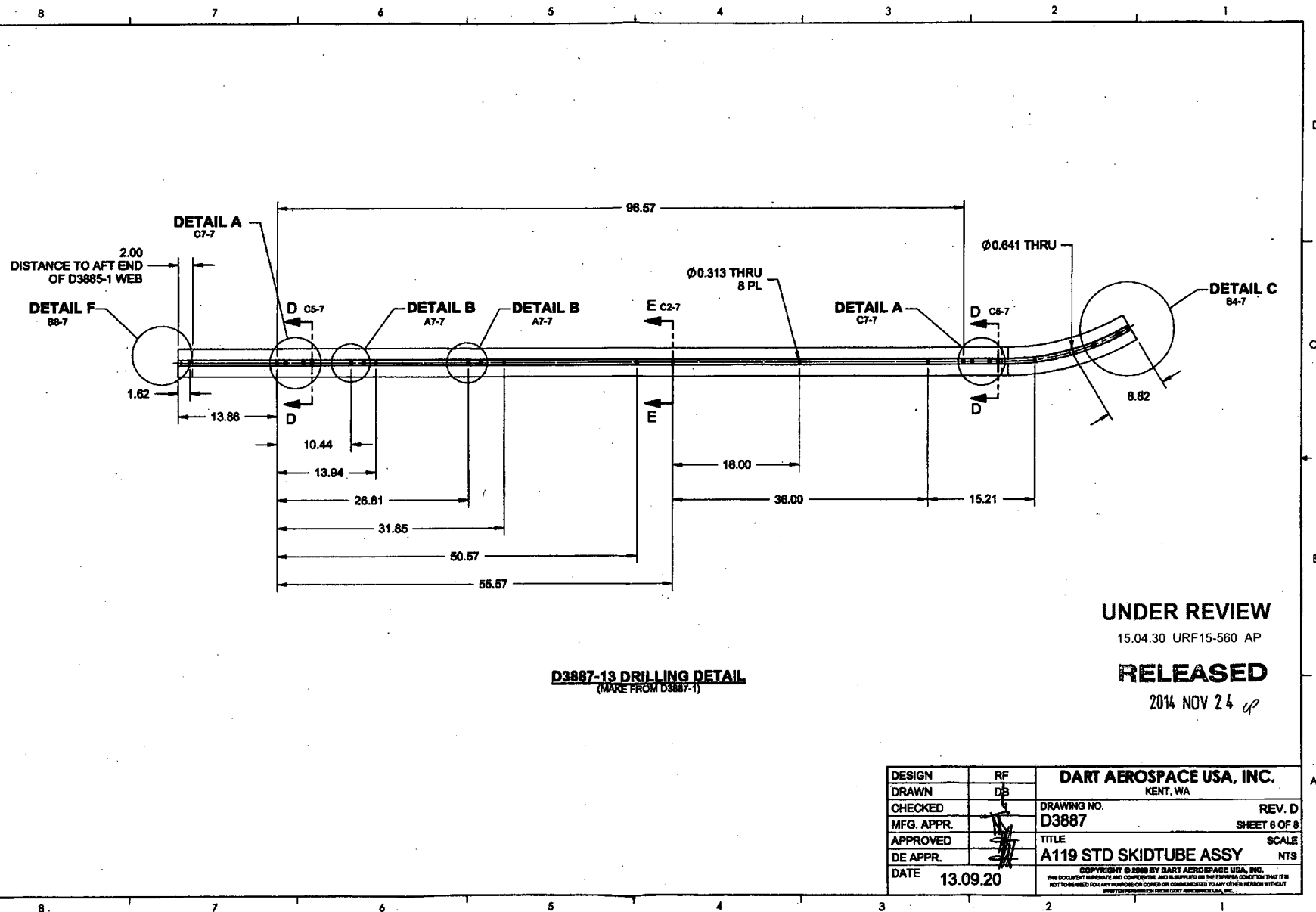
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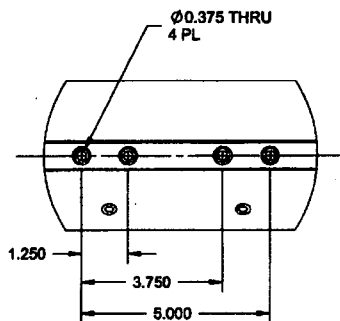
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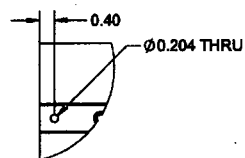
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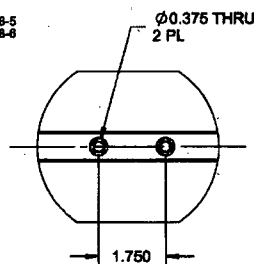
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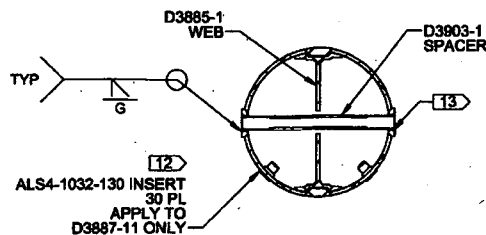
DETAIL A
SCALE 4X
D7-5
C3-5
D7-6
C3-6



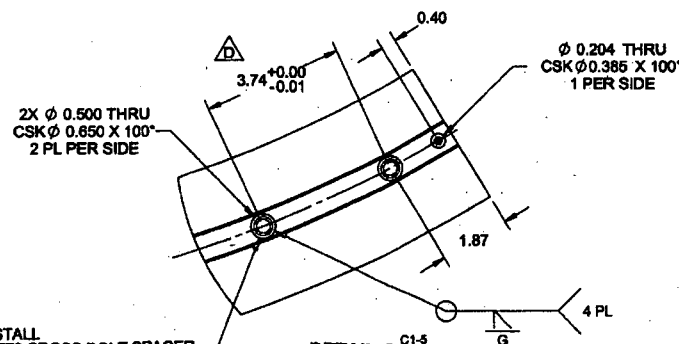
DETAIL F
SCALE 4X
C8-5
C8-6



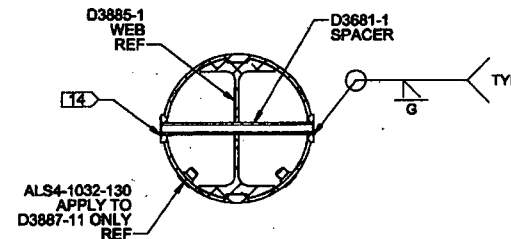
DETAIL B
SCALE 4X
C8-5
C8-6
C5-6
C5-6



SECTION D-D
SCALE 4X
C7-5
C3-5
C7-6
C2-6
(FOR 12 X Ø0.375 HOLES PER SKIDTUBE)



DETAIL C
TYPICAL
SCALE 4X
C1-5
C1-6



SECTION E-E
SCALE 4X
C4-5
C4-6
(FOR 8 X Ø0.313 HOLES PER SKIDTUBE)

NOTES:

13) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:

- i) CHAMFER HOLES Ø0.475 x 45°
- ii) INSERT D3803-1 SPACER
- iii) WELD INTO PLACE AND GRIND FLUSH
- iv) CBORE TO 0.313 x 0.75 DEEP
- v) DEBURR HOLES

14) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.313 HOLES ONLY:

- vi) CHAMFER HOLES Ø0.364 x 45° OR 0.050 DEEP x 45° (BOTH SIDES)
- vii) INSERT D3881-1 SPACER
- viii) WELD INTO PLACE AND GRIND FLUSH
- ix) DEBURR HOLES

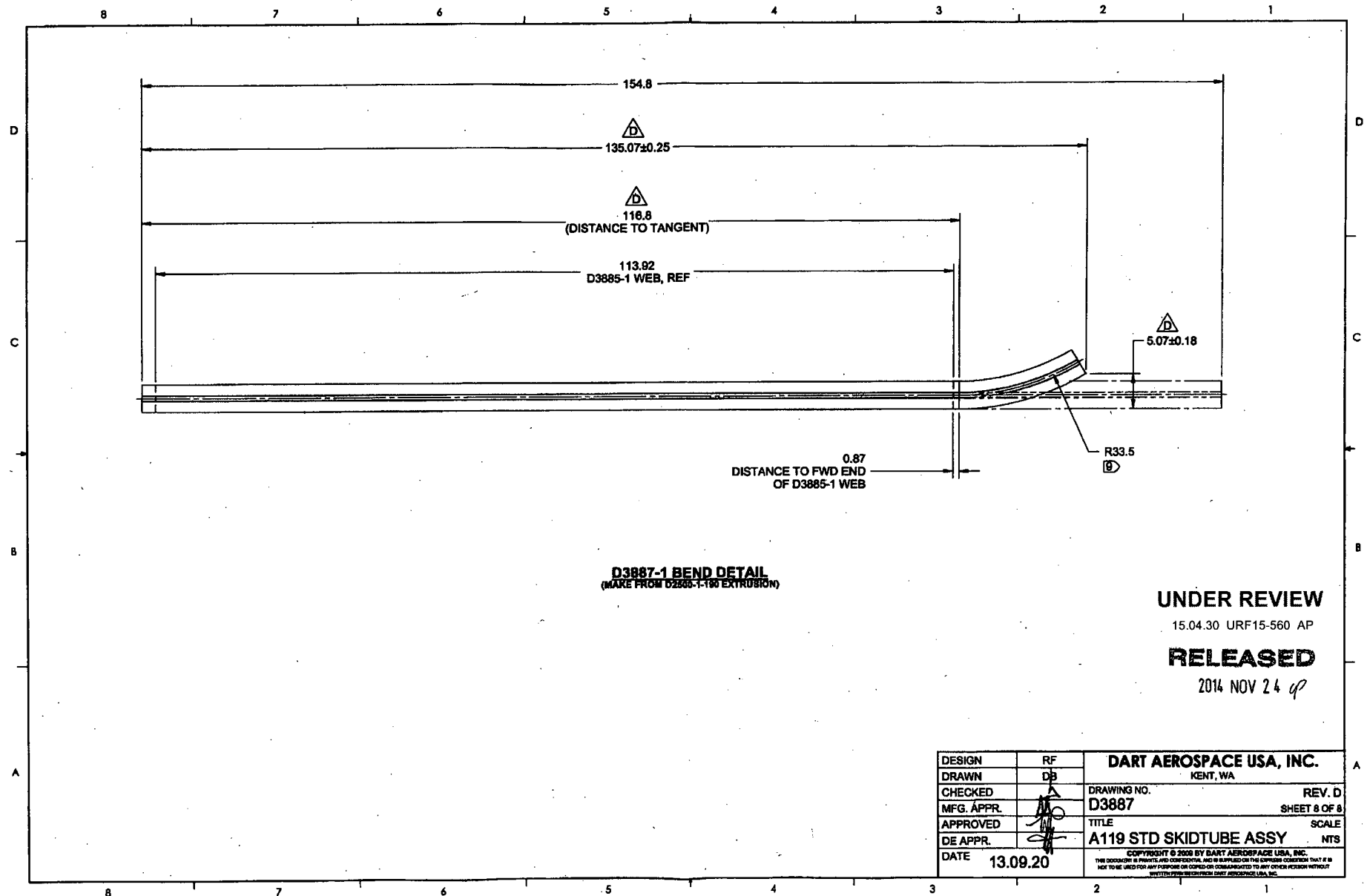
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DQA:

Date: 2017-05-25



QA Closed:

Date: APR 26 2017

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only



Work Order: 150 878		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. 1019-646-041		Rework ☒		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☒		
NCR No. 17-6392		Scrap ☐		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
Suspected Unapproved ☐				Large Fab ☐	Composite ☐	Supplier ☐			
Date: 16/3/16	Step #: 240	QTY Effective :				MRB (QSI042) Approval			
Description Work Order Deviation		Disposition				DAS 12 9-89 16/9/12			
Plug unused holes with AN3C4A Bolts rather than AN3CSA Bolts.		Acceptable				Completed By 17/08/12			
						Lead hand / Supervisor Approval Verification DAS 9 9-89 17-02-01			
						QC/QA Coordinator Approval DAS 9 9-89 17-02-01			
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☒	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☒				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

DQA: _____ Date: _____

QA Closed: [Signature]Date: APR 26 2017**WORK ORDER NON-CONFORMANCE / UPDATE**Work Order update only ☒

Work Order: <u>150878</u> Part No. <u>D119-646-011</u> NCR No. <u>17-6391</u>		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☒ Quality ☐ Other ☐			
Date: <u>16/5/16</u>		Step #: <u>200</u>		QTY Effective: <u>1</u>		MRB (QSI042) Approval DAS 12 9-89 <u>16/4/12</u>	
Description Work Order Deviation				Disposition			
No powder coat on saddle region per customer request.				Acceptable per attached masking instructions			
				Completed By <u>17-02-7</u> <u>[Signature]</u> Lead hand / Supervisor Approval Verification DAS 9 9-89 <u>17-02-07</u>			
				QC / QA Coordinator Approval DAS 9 9-89 <u>17-02-07</u>			
Root Cause Environment ☐ Design ☒ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ ☒ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		☒ OTHER: <u>Customer</u>					

